

MAT 044

5082697



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

D6101-013

Job Sheet 178191



Part No: D6101-013

Job Qty: 16 ea

Part Name: Saddle Billet



Part Weight: 0 lbs

Status: Scheduled

Priority: Medium

Job Created: 5/28/18

Job Tracking No:

Due Date: 6/25/18

Created By: Chantal Lavoie

Type: Stock

Description:

Note: DWG REV B

Ship Via:

Bill of Materials

Job Routing

Op No	Operation	Qty	Start Date	Due Date	Standard		Workcenter/Supplier		Sign-off
					Setup hrs	Run Hrs	Workcenter / Supplier	Lead Time	
100	Purchasing	16 pcs		6/25/18	0.00	0.00	Purchasing		AT 19/06/20
110	Packaging	16 pcs		6/25/18	0.00	0.00	Packaging2		AT 18/06/20
120	QC	16 pcs		6/25/18	0.00	0.00	QC6		
130	Packaging	16 pcs		6/25/18	0.00	0.00	Packaging3-2		SP 18-06-20
140	QC21-SA	16 Ea		6/25/18	0.00	0.00	QC21		DAS JUN 21 2018

Part Op 100 - Issue P/O: 40067 b) 10.100" x 8.250" x 2.50" thick (+0.030 / -0.000) d) Grain direction along 10.100"

Descriptions: length

110 - Ensure material certification is attached

120 - Ensure Material certification comply to Dwg D6101

130 - LOCATION: MAT044

MAY 31 2018

DAS
13
9-89

X 16

Job BOM

Part / Item	Component Name	Quantity	Operation	Container
D6101-013P	Saddle Billet	16 pcs (1 ea)	100-Purchasing	5082696

Job Allocations

Operation	Component Part	Required	Inventory	Allocated
100-Purchasing	D6101-013P	16	0	0

Part Specifications

Specifications could not be found.

Plex 5/28/18 3:12 PM dart.lavoie.chantal

[REDACTED]

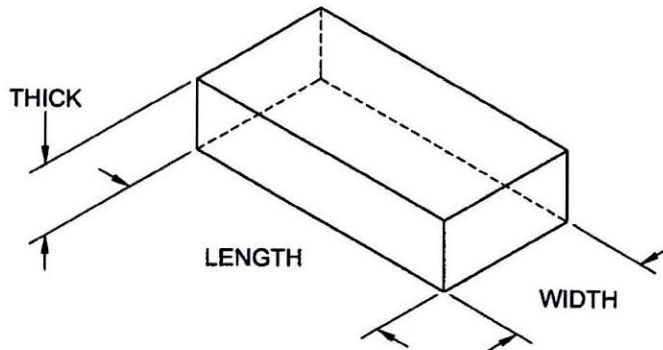
PART NO: D6101-007

Revision:

Mfg Date: 06/20/18

Job No: 178190

SPECIFICATION CONTROL DRAWING



PURCHASE MATERIAL ACCORDING TO THE FOLLOWING TABLE. SPECIFY ALLOY, LENGTH x WIDTH x THICK (+0.030/-0.000), AND GRAIN DIRECTION AS SHOWN.

TOLERANCES ON ALL DIMENSIONS ARE +0.030/-0.000.

ALL DIMENSIONS ARE IN INCHES.

B ACCEPTABLE SPECIFICATIONS FOR 7075-T7351 ALUMINUM ARE AMS-QQ-A-250/12, QQ-A-250/12, OR ASTM B209

Part No.	Alloy	Length	Width	Thick	Grain Direction
D6101-001	7075-T7351 (QQ-A-250/12)	6.000	6.250	2.000	Along 6.000 Length
D6101-003	7075-T7351 (QQ-A-250/12)	7.875	6.250	2.000	Along 7.875 Length
D6101-005	7075-T7351 (QQ-A-250/12)	5.000	8.250	2.500	Along 5.000 Length
D6101-007	7075-T7351 (QQ-A-250/12)	7.750	8.250	2.500	Along 7.750 Length
D6101-009	7075-T7351 (QQ-A-250/12)	8.700	8.250	2.500	Along 8.700 Length
D6101-011	7075-T7351 (QQ-A-250/12)	9.700	8.250	2.500	Along 9.700 Length
D6101-013	7075-T7351 (QQ-A-250/12)	10.100	8.250	2.500	Along 10.10 Length
D6101-015	7075-T7351 (QQ-A-250/12)	9.450	6.250	2.500	Along 9.450 Length
D6101-017	7075-T7351 (QQ-A-250/12)	6.350	6.250	2.250	Along 6.350 Length

RELEASED
09/07/15/W

B	ADDED D6101-015/-017, ADD ASTM B209	RF	09.04.23
A	NEW ISSUE	CP	01.03.30
REV.	DESCRIPTION	BY	DATE
DESIGN	CP	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWN	RF		
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. B
MFG. APPR.	<i>[Signature]</i>	D6101	SHEET 1 OF 1
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	SADDLE BILLET, 7075	NTS
DATE	09.04.23	COPYRIGHT © 2001 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

5/31/2018

PURCHASE ORDER



Dart Aerospace Ltd.
1270 Aberdeen St
Hawkesbury, ON
K6A 1K7
Canada

Tel (613) 632-5200

PURCHASE ORDER

PO040067

Supplier: MEC002-VU
Metaux Castle
P.O. Box 4090 Stn A
Toronto
ON
M5W OE9 Canada

PO No: PO040067

PO Date: 5/31/18

Due Date: 6/22/18

Purchase Order
Revision:

Revision Date:

Ship-To Contact: Lavoie, Chantal
clavoie@dartaero.com

Ship To: 1270 Aberdeen Street
Hawkesbury
ON
K6A 1K7 Canada
Phone: 613-632-5200

Via: Ground

Pymt Terms: Net 30

Freight Terms:

Special Comments:

Items

Line Item	Part	Supplier Part No	Description	Status	Due Date	Order Quantity	Received Quantity	Balance	Unit Price (USD)	Extended Price
1	D6101-007P	101	7075-T7351 8.25X7.75X2.5 AS PER DWG D6101 REV. B MATERIAL: 7075-T7351 (QQ-A-250/12) SIZE: 7.750" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 7.750" LENGTH TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	6/22/18	20 pcs	0 pcs	20 pcs	\$56.11/pcs	\$1,122.20
Line Item Note wo 178190										
2	D6101-013P	101	Saddle Billet AS PER DWG D6101 REV. B MATERIAL: 7075-T7351 (QQ-A-250/12) SIZE: 10.100" X 8.250" X 2.50" THICK GRAIN DIRECTION ALONG: 10.100" LENGTH TOLERANCE AS PER QUOTE +.030"/-.000"	Firmed	6/22/18	16 pcs	0 pcs	16 pcs	\$73.15/pcs	\$1,170.40
Line Item Note wo 178191										
3	D6103-003P		Round Alum Billet AS PER DWG D6103 REV. B MATERIAL: 7075-T7351 AS PER QQ-A-225/9 SIZE: 3.500" X 12.500" LONG	Firmed	6/22/18	30 pcs	0 pcs	30 pcs	\$60.40/pcs	\$1,812.00
Line Item Note wo 178193										
4	D6104-007P		17-4 SS Roundbar 4.50"Od	Firmed	6/22/18	10 pcs	0 pcs	10 pcs	\$68.53/pcs	\$685.30
Line Item Note wo 178194										

Plex 5/31/18 11:12 AM dart.lavoie.chantal

**Castle Metals®**

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 1 of 2

Shipment No:3625221

Ship From: A. M. CASTLE & CO. 2150 ARGENTIA ROAD MISSISSAUGA, ON L5N 2K7 CAN		Sold To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA		Ship To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CAN		Deliver To: DART AEROSPACE LTD 1270 ABERDEEN HAWKESBURY, ON K6A 1K7 CA	
Date Shipped	F.O.B.	Freight Terms		Carrier		BOL No	
18-JUN-18	ORIGIN	Prepaid		MANITOULIN		3625221-2	

Shipment Details	Final Destination Branch - TOR
-------------------------	---------------------------------------

Order No	Line No	Item No	Description				
5157988	2	752241.MO	2.5000.PL.7075.T7351.ALUMINUM.USI.48.5000.144.5000 CUT 2SIDED TO 8.25 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 10.1")) X 10.1 IN (+ .0310/- .0000 IN (GRAIN TO RUN ALONG 10.1")) - ALUMINUM PLATE SAW SPECIFICATIONS: AMS-QQ-A-250/12				
Purchase Order No		Part Number		Ordered Qty		Invoice Qty	
40067		YOUR ITEM NUMBER: D6101-013		16.00 PCS		16.00 PCS	
Details		ALL PAPERWORK MUST FOLLOW ORDER / CUSTOMER MUST RECEIVE AT TIME OF DELIVERY ALL MATERIAL MUST HAVE IDENTIFYING MARKINGS EX:HEAT #’S Email P/s and certs to: clavoie@dartaero.com END USER: DART AEROSPACE END USE: COMMERCIAL AIRCRAFT PARTS					
Delivery No.	Mill/Source	Heat Number	Mech Id	PCS	Width (IN)	Length (IN)	Shipped Qty(LBS)
121880946	CONSTELLIUM ROLLED PRODUCTS			16			344.7123

We hereby certify the material covered by this certification conforms in accordance with the above specifications and has been found to meet the applicable requirements for the material, including any specifications forming a part of the description. Test reports are on file subject to examination. All claims for defective material are waived unless made in writing to A.M. Castle & Co. within 60 days of the shipment. Material cut to the correct size, or material cut by the customer cannot be returned for credit.

Date Printed: 18-JUN-2018 02:49:51 PM



Castle Metals®

A. M. Castle & Co.

PACKING SLIP/
CERTIFICATE OF CONFORMANCE

Page 2 of 2

Reviewed by Authorized Castle Metals Representative:

JUN 18 2018



Name:

SUE KALOUS

**Constellium****Naacap**
Materials Testing Laboratory**Constellium Rolled Products**
Ravenswood, LLCS
H
I
P

T
OA M CASTLE CO
3050 SO HYDRAULIC
WICHITA KS
67216
USS
O
L
D

T
OA M CASTLE
1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE		110644526		4776		INCLUSION		Serial:20180405-0110644526		Pg 1of3	
CUSTOMER PURCHASE ORDER NO. & ITEM 453753						Constellium ORDER NO. 232825			CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  Dave Dunbarger - Laboratory Manager		
ALLOY 7075	CLAD	TEMPER T7351	GAUGE 2.50000 in 63.50 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm						
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION AMS 4078J											
PART NUMBER 752241			B/L NUMBER 97582		DATE SHIPPED 04/05/2018						
WT. SHIPPED 10620.000 LB		NO. OF PIECES 000006		GOVT. CONTRACT NO.							

ALL LOTS ON THIS CERTIFICATION ALSO CONFORM TO THE FOLLOWING REQUIREMENTS:

ASTM B594 REV 13 2013 100% SONIC W/ 0.12" DEADZONE Class A
 AMS QQ-A-250/12A
 AMS-STD-2154A 2012 TYPE1 CLASS A 100% SONIC MINUS DEADZONE
 ASTM B209-14
 BSS-7055B 2013 CLASS A 100% SONIC TESTED MINUS DEADZONE
 CMMP025 REV U
 CSTI006 REV E 2011 CLASS A 100% SONIC MINUS DEADZONE
 DPS 4.713 REV AK 2012 CLASS A 100% SONIC MINUS DEADZONE
 GAMPS 9101 REV B 2006 CLASS A 100% SONIC MINUS DEADZONE
 MMS 159T
 PS 21211P 2010 CLASS A 100% SONIC MINUS DEADZONE

Load Details

Package	Net Lbs	Kg	Lot	Piece	Serial	Parent Lot
1001745311	1,770.000	802.858	9413626	01		
1001745311	1,770.000	802.858	9413626	02		
1001745312	1,770.000	802.858	9413626	03		
1001745312	1,770.000	802.858	9413626	04		
1001754246	1,770.000	802.858	9413628	01		
1001754246	1,770.000	802.858	9413628	02		

Lot: 9413626 (See test results below)**Tensile - Room Temperature (US)**

Direction	Tests	Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report
		Min	Max	Min	Max	Min	Max	
LT	02	75.7	76.0	64.2	64.7	11.5	12.0	





Constellium Rolled Products
Ravenswood, LLC

S
H
I
P

T
O

A M CASTLE CO
3050 SO HYDRAULIC
WICHITA KS
67216
US

S
O
L
D

T
O

A M CASTLE
1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE		110644526		4776		INCLUSION		Serial:20180405-0110644526		Pg 2of3	
CUSTOMER PURCHASE ORDER NO. & ITEM 453753						Constellium ORDER NO. 232825					
ALLOY 7075		CLAD		TEMPER T7351		GAUGE 2.50000 in 63.50 mm		WIDTH 48.50000 in 1,232 mm		LENGTH 144.50000 in 3,670 mm	
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH											
CUSTOMER SPECIFICATION AMS 4078J											
PART NUMBER 752241				B/L NUMBER 97582				DATE SHIPPED 04/05/2018			
WT. SHIPPED 10620.000 LB				NO. OF PIECES 000006				GOVT. CONTRACT NO.			
										CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA	
										 Dave Dunbarger - Laboratory Manager	
Tensile - Room Temperature (SI)											
		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report			
Direction	Tests	Min	Max	Min	Max	Min	Max				
LT	02	522	524	443	446	11.5	12.0				
Conductivity % IACS MIN 40.0 MAX 40.1 % MS/M MIN 23.2 MAX 23.3											
Chemistry (Actual)											
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR		
Core	0.05	0.11	1.41	0.05	2.57	0.20	5.55	0.04	0.00		
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER											
All material contained in this lot was cast and manufactured in the USA											
Lot: 9413628 (See test results below)											
Tensile - Room Temperature (US)											
		Ultimate (KSI)		Yield (KSI)		Elongation (%)		Report			
Direction	Tests	Min	Max	Min	Max	Min	Max				
LT	02	74.6	74.8	63.6	63.8	12.5	12.5				
											
P-860-155D REVISED: 01 2018											

**Constellium****Naacap**
Materials Testing Laboratory**Constellium Rolled Products
Ravenswood, LLC**S
H
I
P
T
OA M CASTLE CO
3050 SO HYDRAULIC
WICHITA KS
67216
USS
O
L
D
T
OA M CASTLE
1420 KENSINGTON ROAD, SUITE 220
OAK BROOK IL
60523
US

A M CASTLE		110644526		4776		INCLUSION		Serial:20180405-0110644526		Pg 3of3																												
CUSTOMER PURCHASE ORDER NO. & ITEM 453753						Constellium ORDER NO. 232825			CERTIFICATION "Constellium Rolled Products, hereby certifies that metal shipped under this order has been inspected and found in conformance with the requirements of the applicable specifications as indicated herein. Any warranty is limited to that shown on Constellium Rolled Products' standard General Terms and Conditions of Sales. Test reports are on file, subject to examination." Constellium Rolled Products Ravenswood, LLC 859 Century Road P.O. BOX 68 RAVENSWOOD, WV 26164 USA  Dave Dunbarger - Laboratory Manager																													
ALLOY 7075	CLAD	TEMPER T7351	GAUGE 2.50000 in 63.50 mm	WIDTH 48.50000 in 1,232 mm	LENGTH 144.50000 in 3,670 mm																																	
ITEM ORDERED SPEC PLATE, SAWED MILL FINISH																																						
CUSTOMER SPECIFICATION AMS 4078J																																						
PART NUMBER 752241			B/L NUMBER 97582		DATE SHIPPED 04/05/2018																																	
WT. SHIPPED 10620.000 LB		NO. OF PIECES 000006		GOVT. CONTRACT NO.																																		
Tensile - Room Temperature (SI) <table border="1" style="width:100%; border-collapse: collapse; margin-top: 10px;"> <thead> <tr> <th colspan="2"></th> <th colspan="2">Ultimate (N/MM2)</th> <th colspan="2">Yield (N/MM2)</th> <th colspan="2">Elongation (%)</th> <th>Report</th> </tr> <tr> <th>Direction</th> <th>Tests</th> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> <th>Min</th> <th>Max</th> <th></th> </tr> </thead> <tbody> <tr> <td>LT</td> <td>02</td> <td>514</td> <td>516</td> <td>439</td> <td>440</td> <td>12.5</td> <td>12.5</td> <td></td> </tr> </tbody> </table>														Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report	Direction	Tests	Min	Max	Min	Max	Min	Max		LT	02	514	516	439	440	12.5	12.5	
		Ultimate (N/MM2)		Yield (N/MM2)		Elongation (%)		Report																														
Direction	Tests	Min	Max	Min	Max	Min	Max																															
LT	02	514	516	439	440	12.5	12.5																															
Conductivity % IACS MIN 40.0 MAX 40.9 % MS/M MIN 23.2 MAX 23.7																																						
Chemistry (Actual) <table style="width:100%; margin-top: 10px;"> <tr> <td></td> <td>SI</td> <td>FE</td> <td>CU</td> <td>MN</td> <td>MG</td> <td>CR</td> <td>ZN</td> <td>TI</td> <td>ZR</td> </tr> <tr> <td>Core</td> <td>0.05</td> <td>0.10</td> <td>1.44</td> <td>0.04</td> <td>2.59</td> <td>0.19</td> <td>5.58</td> <td>0.04</td> <td>0.00</td> </tr> </table>													SI	FE	CU	MN	MG	CR	ZN	TI	ZR	Core	0.05	0.10	1.44	0.04	2.59	0.19	5.58	0.04	0.00							
	SI	FE	CU	MN	MG	CR	ZN	TI	ZR																													
Core	0.05	0.10	1.44	0.04	2.59	0.19	5.58	0.04	0.00																													
OTHERS-EACH: .05 MAX. OTHERS TOTAL: .15 MAX. AL REMAINDER																																						
All material contained in this lot was cast and manufactured in the USA																																						
QUALITY TEXTS: AMC CA-15413B R 6																																						
THIS TEST REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL, WITHOUT THE WRITTEN APPROVAL OF THE LABORATORY OR AUTHORIZED QUALITY DELEGATE. THE RECORDING OF FALSE, FICTITIOUS, OR FRAUDULENT STATEMENTS OR ENTRIES ON THE CERTIFICATE MAY BE PUNISHED AS A FELONY UNDER FEDERAL LAW. CHEMISTRY BY OES: ARKSPARK CHEMISTRIES REPORTED IN PERCENTAGE BY WEIGHT WHEN FRACTURE TOUGHNESS TEST REQUIRED, TESTED PER ASTM E399 WHEN TENSILE TEST REQUIRED, TESTED PER ASTM E8; B557 DUNS Number: 090570149; CAGE Code: 1YW19 Mercury is not a normal contaminant in aluminum alloys and neither mercury nor any of its compounds were utilized in the manufacture of our product. "END OF CERTIFICATION"																																						
P-860-155D REVISED: 01 2018																																						



MATERIAL RECEIPT INSPECTION FORM

MATERIAL: 06101-013
 DATE: 18/06/20

PO / BATCH NO.: 10040067/5082697

MATERIAL CERT REC'D: Yes
 QUANTITY RECEIVED: 16
 QUANTITY INSPECTED: 16
 QUANTITY REJECTED: 0

THICKNESS ORDERED: 2.5"
 THICKNESS RECEIVED: 2.5"
 SHEET SIZE ORDERED: —
 SHEET SIZE RECEIVED: —

DESCRIPTION	NCR (Check Y/N)		COMMENTS
SURFACE DAMAGE	Y	☒	
CORRECT FINISH	☒	N	
CORROSION	Y	☒	
CORRECT GRAIN DIRECTION	☒	N	
CORRECT MATERIAL PER M-DRAWING	☒	N	<u>AMS 4078J</u>
CORRECT THICKNESS	☒	N	
PHOTO REQUIRED	Y	☒	
CORRECT REF # TO LINK CERT	☒	N	<u>47 9913626</u>
CORRECT MATERIAL IDENTIFICATION	☒	N	
CORRECT M# ON THE MATERIAL	☒	N	
DOES THIS MATERIAL REQUIRE ENGINEERING SIGN OFF	Y	☒	
DOES THIS REQUIRE AN EXTRUSION REPORT	Y	☒	

CUT SAMPLE PIECE OF MATERIAL AND PREFORM A HARDNESS CHECK. RECORD RESULTS BELOW					
TYPE OF MATERIAL	HRC	HRB	DUR A	DUR D	WEBSTER
SIZE OF TEST SAMPLE					
HARDNESS / DUROMETER READING					

testers located in the Quality Office

QC 18 INSPECTION	ENGINEERING SIGNOFF (if required)
INSPECTED BY: <u>AT 18/06/20</u> DAS 9 9-89 DATE: <u>18/06/20</u>	SIGNED OFF BY: _____ DATE: _____

Attach this inspection sheet with the corresponding material cert and remit to be scanned and received in



DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>[Signature]</i>	APPROVED <i>[Signature]</i>	DRAWING NO. M707ST73B	REV A SHEET 1 OF 1
DATE 01.06.08		TITLE 7075-T73 BAR	SCALE NTS
A	01.06.08	NEW ISSUE	

PURCHASE MATERIAL: 7075-T73 (OR 7075-T7351 / T73510 / T73511) BAR
PER AMS-QQ-A-200/11 OR AMS-QQ-A-225/9 (AMS 4124)
OR AMS-QQ-A-250/12 (AMS 4078)

PART NUMBER: M707ST73B | T.TTT | x | WW.WWW | WHERE T.TTT = THICKNESS (IN INCHES)
THICK | WIDTH | WW.WWW = WIDTH (IN INCHES)
EG. 2.5" x 3.25" BAR = M707ST73B2.500 x 03.250

RELEASED
01 Dec 15 *[Signature]*

Copyright © 2001 by DART AEROSPACE LTD

THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.